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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 10/046,273 | 01/16/2002 | Ulrich Kaczynski | 016790-0450 | 3526 |
| 22428 | 7590 | 12/29/2004 | EXAMINER | |
| FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | VERBITSKY, GAIL KAPLAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2859 | |

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,273

Applicant(s)

KACZYNSKI, ULRICH

Examiner

Gail Verbitsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-17,22 and 24-38 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 16 and 33 is/are allowed.
6) ☒ Claim(s) 10-15,17,22,24-32,34-38 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: 04 Attachment

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10-14, 22, 27-31, 35 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky (U.S. 4792206).

Skuratovsky discloses in Fig. 1 a device/ sensor/ machine comprising a housing part (fixed member) 30 to which a protruding component/ optical element 12 is connected/ supported/ protrudes. The device also comprises an impact detection element A which is displaceable (structure 24 and movable body, col. 3, line 4, not shown), a light source 42 coupled to the housing part 30 by means of the protruding/ optical element 12, the housing part 30 defining an emission surface, a receiving element 14 coupled to the impact detection element A (see attachment # 1 to the Office action). The impact detection element A is coupled/ movably connected to the housing part. The receiving element also coupled to the housing part by means of 24 wherein the housing part defining a receiving surface 38 opposite to the emission surface 34 of the light source 42. When the impact detection A element is not moved (no collision/ impact to the impact detection element), the emission and receiving surfaces are aligned, and the light is transmitted from the emission surface to the receiving surface.

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Since the light receiver 46 receives transmitted light and determines its intensity, in a broad sense, it is considered that the light receiver 46 is an intensity sensor.

For claims 10-11, 13: a housing part 50 to which a protruding element 12 is connected/ protrudes, an impact detection element A comprising a movable body as described in col. 3, line 4 and moveable structure/ rod 24, a light source 42 coupled to the housing part by means of the protruding component 12, a receiving element 14 coupled to the impact detection element A defining a receiving surface which is opposite to the emission surface of the light source 42. The emission surface 34 and the receiving surface 38 are of substantially the same size. The device also comprises an intensity sensor/ light receiver 46.

For claims 10-14: a housing part 30 to which a protruding element 14 is connected/ protrudes by means of an impact detection element A comprising a movable body as described in col. 3, line 4 and moveable structure/ rod 24. the impact detection element A at least partially surrounds the protruding component 14; a light source 42 coupled to the housing part 30 by means of the protruding component 14, a receiving element/ light receiver 46 coupled to the impact detection element A by means of the protruding element 12 and defining a receiving surface which is opposite to the emission surface of the light source 42. The emission surface 34 and the receiving surface 38 are of substantially the same size. The device also comprises an intensity sensor/ light receiver 46. The light source 42 comprises at least one light guided fiber 12, and the emission surface is defined by the end of the light-guided fiber 12.

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For claims 27-31: a housing part 30 to which a protruding element 14 is connected/ protrudes by means of an impact detection element A comprising a movable body as described in col. 3, line 4 and moveable structure/ rod 24. The impact detection element A at least partially surrounds the protruding component 14; a light source 42 coupled to the housing part 30 by means of the protruding component 14, a receiving element/ light receiver 46 coupled to the housing part 30 by means of the structure 24 and structure 18 and defining a receiving surface which is opposite to the emission surface of the light source 42. The emission surface 34 and the receiving surface 38 are of substantially the same size. The device also comprises an intensity sensor/ light receiver 46. The light source 42 comprises at least one light guided fiber 12, and the emission surface is defined by the end of the light-guided fiber 12. The receiving surface 38 directs light emitted by the emission surface 34 onto at least one light guiding fiber 44 connected to the intensity sensor 46. Thus, the intensity sensor 46 is associated with the receiving surface 38.

With respect to the preamble of claims 10, 27: the preamble of the claim has not provided enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. *Kopa v. Tobie*, 88 USPQ 478 (CCPA 1951).

For claims 11, 22, 28, 35: With respect to the particular light path (length) between the emission and receiving surface, that is smaller than a cross section of the receiving and

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emission surface, as stated in claims 11, 22, 28, 35, the particular light path (length/size), absent any criticality, is only considered to be the "optimum value" of the light path length disclosed by Reimer that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy of the device, etc. In re Boesch, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the length of the light path, disclosed by Skuratovsky, less than the cross section of the emission surface, so as to minimize loss of the signal, and thus, to achieve a desired accuracy of the device.

3. Claim 15, 32 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky as applied to claims 10-14, 22, 24, 27-31, 35 above, in view of GB 2185359 A [hereinafter GB].

Skuratovsky discloses the device as stated above in paragraph 2.

Skuratovsky does not explicitly disclose that the receiver has a reflective surface to direct the light to the at least one optical fiber, as stated in claims 15, 32.

GB teaches in Fig. 1 a device whose receiver (6, 15, 4) having a reflective surface (mirror) 4 directing (reflecting) a light illuminated (emitted) from a fiber (light source) 7 onto a receiving fiber 6 of a receiver 15.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a reflective surface (mirror) as taught by GB, to the

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device, disclosed by Skuratovsky, so as to direct the emitted radiation directly onto a transmitting fiber and eliminate losses of the radiation.

4. Claims 24-26 and 36-38 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky as applied to claims 10-14, 22, 24, 27-31, 35 above, and further in view of Eno (U.S. 5422969).

Skuratovsky teaches the device as stated above in paragraph 2.

Skuratovsky does not explicitly teach to not transmit light when there is a displacement/ collision.

Eno teaches that light is transmitted when emitting and receiving optical cables are aligned, and not transmitted when they are displaced.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by Skuratovsky, so as to allow the light to be transmitted when the optical cable are aligned and not transmitted when the optical cables are not aligned, so as to transmit data only incase if everything operate normally.

With respect to the preamble of claims 24, 26, 36, 38: the preamble of the claim has not provided enough patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Kopa v. Tobie, 88 USPQ 478 (CCPA 1951).

5. Claims 17, 34 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Skuratovsky as applied to claims 10-14, 22, 24, 27-31, 35 above, and further in view of Lord (U.S. 5502301).

Skuratovsky discloses the device as stated above in paragraph 2.

Skuratovsky does not explicitly teach the particular intensity sensor as stated in claims 17 and 34.

Lord discloses a device in the filed of applicant's endeavor comprising a comparator/ intensity sensor which generates an (electrical) input signal in response to a sensed output signal/ power of the output signal, thus, providing a control loop.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the intensity sensor in the device disclosed by Skuratovsky, so as to provide a loop control, as taught by Lord, so as to allow the operator to correct the displacement before permanent damage occurs.

Allowable Subject Matter

7. Claims 16, 33 are allowed.

Response to Arguments

8. Applicant's arguments filed on October 13, 2004 have been fully considered but they are not persuasive.

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With respect to Skuratovsky: Applicant states that Skuratovsky does not teach a "housing part to which a protruding component is connected" or an "impact detection element movably connected to the housing part". This argument is not persuasive because, in Fig. 1, Skuratovsky teaches a protruding element 12 connected to a part 30 which is considered to be a housing part by the Examiner, an impact detection (not shown, but described in col. 3, line) movable and connected to a structure 24 which in its turn is connected to the housing part 30, thus, the impact detection element is movably connected to the housing part 30 by means of the structure 24.

Applicant states that the structure 12 of Skuratovsky is a fiber optic cable that transmits the light. That the fiber optic cable is not a protruding component to be protected. This argument is not persuasive because the limitation applicant relies on (i.e., protruding component to be protected) is not stated in the claims. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable.

Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

With respect to GB: Applicant states that GB does not disclose a protruding component, an impact detection element, etc. This argument is not persuasive because, in the rejection on the merits, the Examiner uses GB as a secondary reference only for its teaching of the particular receiver with a reflective surface. The rest of the elements are disclosed by Skuratovsky being a primary reference. Thus, the combination of Skuratovsky and GB teaches the claimed invention.

With respect to Eno: Applicant states that Eno does not teach an "impact detection element movably connected to the housing part, a light source coupled to the impact

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detection element defining an emission surface and a receiving element coupled to the housing part defining a receiving surface". This argument is not persuasive because, in the rejection on the merits, the Examiner uses Eno as a secondary reference only for its teaching that the light is not transmitted when a displacement/ collision. The rest of the elements are disclosed by Skuratovsky being a primary reference. Thus, the combination of Skuratovsky and GB teaches the claimed invention.

With respect to Lord: Applicant states that Eno does not teach an "impact detection element movably connected to the housing part" or a "protruding element". This argument is not persuasive because, in the rejection on the merits, the Examiner uses Lord as a secondary reference only for its teaching of the particular intensity sensor. The rest of the elements are disclosed by Skuratovsky being a primary reference. Thus, the combination of Skuratovsky and GB teaches the claimed invention.

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800



December 15, 2004